Inyo National Forest
Kern Plateau Collaborative Public Meeting
- Minutes -
19 August 2012, 1pm-4:30pm
Boulder Creek RV Park, Lone Pine, CA

Facilitator

Last Name	First Name	Organization/Affiliation
Hill Drum	Heidi	Center for Collaborative Policy

Field Trip Participants

Last Name	First Name	Organization/Affiliation
Bartley	Tim	Federation of Flyfishers
Behrens	Zach	KCET
Bruschaber	Debbie	Sierra Pacific Flyfishers
Chilcoat	Rose	Great Old Broads for Wilderness
Cushman	Doug	Lahontan Regional Water Board
Drew	Mark	CalTrout
Fogarty	Gabe	Spainhower Anchor Ranch
Hunter	Roy & Janice	Hunter Ranch
Kemp	Scott	Kemp Ranch
Kern	Howard	Trout Unlimited
Kruger	David	None
Miller	Emily	Lahontan Regional Water Board
Noland	Tom	Spainhower Anchor Ranch
Raven	Heather	None
Shuman	Todd	None
Stroud	Danna	Sierra Nevada Conservancy
Zellner	Karl	Aguabonita Fly Fishers

Forest Service Participants

Last Name	First Name	Organization/Affiliation	Title
Weixelman	Dave	Forest Service Region 5	Range Ecologist
Ellsworth	Todd	Inyo National Forest	Watershed Program Manager
Ettema	Nick	Inyo National Forest	Fisheries Biologist
Goehring	Brianna	Inyo National Forest	Rangeland Management Specialist
Nelson	Kathleen	Inyo National Forest	Forest Botanist
Nicholas	Colleen	Inyo National Forest	District Archaeologist
Parsons	Wade	Inyo National Forest	Archaeology Technician
Shannon	Casey	Inyo National Forest	Hydrologist
Sims	Lisa	Inyo National Forest	Aquatics Program Manager
Wood	Margaret	Inyo National Forest	District Ranger
Yen	Lesley	Inyo National Forest	District Resource Staff Officer

Introduction: Margaret Wood and Lesley Yen provided introductions and gave an overview of the slide show presentations

Long Term Condition and Trend Monitoring on the Kern Plateau: Dave Weixelman described the USFS range program long term study plots and meadow and streambank condition. See PowerPoint. He provided a summary of the condition and trend of sites on the Kern Plateau of that sites that have been read at least twice from 1999 to 2010. The re-reads for those sites recently visited will be probably be done in 2014. Most of these long term monitoring sites were established in 1999 with re-reads in 5 or 10 years. Rooted frequency sites were generally placed in the flood plain or terraces while the greenline sites were placed along streambanks. The rooted frequency and greenline methods are designed to show meadow condition on a gradient of low to high (early to late seral). Only a few greenline plots exist in the Whitney and Monache allotments.

Margaret: Dave's report is accessible on the internet. Why does Monache have so few greenlines?

Dave Weixelman: There simply haven't been more greenlines established in Monache.

Doug Cushman: What time of the season do greenlines get assessed relative to grazing?

Dave Weixelman: Greenlines are usually assessed prior to grazing, but even if grazing has occurred, dominant species can still be determined in the greenline.

Rose Chilcoat: Where is desired condition located (along the meadow condition gradient)?

Dave Weixelman: We determined desired condition to be the upper third of the gradient (from the upper third of moderate condition through high condition).

Debbie: How many sites in the Mulkey allotment were located inside the exclosure?

Dave Weixelman: There was a mix. The report online shows the breakdown (of how many sites inside versus outside were at desired condition).

Janice Hunter: What defines desired condition?

Dave Weixelman: Desired condition is met if 70% or greater of the steps along the greenline are late seral species for the greenline method, and if the rooted frequency results in the upper third of moderate condition or higher. Desired condition isn't limited to only late seral species (it includes some mid-seral species) because, for example, a homogenous sod of Carex nebrascensis (Nebraska sedge, a late-seral grasslike species) does not meet desired condition necessarily—we need forbs as pollinator species, and some rare species are also not late-seral.

Rose: The Templeton allotment showed improvement from rest from grazing*….(the notetaker missed the question here.)*

Dave Weixelman: Monitoring sites are important for measuring recovery within a planned grazing system.

Assessment Ratings for Amendment 6 and PFC: Lisa Sims described some meadow sites and their ratings throughout the Templeton and Monache allotments. See PowerPoint presentation [Omit the second part of the first slide where it says "no consistent trend" because this is not statistically supported with these assessments.]. An explanation of the map shown in pg 2, slide 2 is found in the report available online. The imagery in pg 3, slide 3 of Templeton Meadow illustrates the dynamic processes at work: the old channel has changed its course. Slides 3 and 4 on pg 3: Reach A is

much more stable than Reach B. The interdisciplinary team had to balance its assessments to consider that some areas looked to be at PFC while others appeared degraded within the same reach. Pg 4, slide 1 shows Movie Stringer which was at PFC and Schaeffer meadow which was functioning-at risk (FAR) with a downward trend. The channel in Schaeffer Meadow shows little sinuosity in the picture. The right photo of NE Ramshaw stringer (slide 10) shows an area that has been rested almost 30 years (within an exclosure) and is a monoculture of *Carex utriculata* (late seral), but this area still had active headcuts (shown in left photo). This demonstrates that there is not one consistent response within a vegetation type. A lack of vegetation on high terraces often resulted in a FAR rating with an upward rating. Some headcuts seen in the Templeton allotment seemed to threaten the entire meadow. Pg 4, slide 5 shows Kingfisher Stringer in the left photo that was rated FAR because of raw streambanks and Redrock Creek in the right photo that rated at PFC. In this photo you can see the sinuous channel at flood stage. Pg 4, slide 6 shows the East arm of Casa Vieja Meadow that has a headcut. The headcut had been somewhat stabilized, which may mitigate the rating, but still had a FAR rating. The north arm of the meadow shown in the was at PFC. Pg 5, slide 1 shows Bakeoven Meadow at PFC or FAR because of hummocks and a photo of a reach of the South Fork Kern in Monache Meadow that is nonfunctional.

Rose: How big is the exclosure (in NE Ramshaw stringer), and what is happening upstream of the exclosure?

Lisa: The exclosure is about 40 acres in size, and natural processes (not grazing by livestock) or happening upstream.

Whitney Allotment Meadow Assessment Ratings: Todd Ellsworth described meadow sites and their ratings throughout the Whitney allotment. Slide 5: As Dave Weixelman had also discussed, the sites in the Whitney allotment are recovering more slowly than sites in the Templeton allotment. Whitney has been rested from grazing for about 10 years. Sites rated as degraded because: there was much hummocking that directs water flow and creates more energy for moving water. This can create headcuts, nickpoints, and rills; and there were many sloping springs that were susceptible to erosion. Above a 2 to 4% slope, we really started seeing degradation in sloping spring areas on Big Whitney. Some areas in Whitney showed recovery; others didn't. We had to consider bare ground that was caused by rodent activity and vegetation composition change on tops of hummocks. We surmised that the high elevation and thinner soils found on the Whitney allotment contribute to longer recovery than what was observed in other places such as the Templeton allotment. Pg 7, slide 3: Soils in Volcano Meadow are heavily influenced by volcanoes. This soil is more susceptible to compaction (the soil is heavier). This meadow showed more bare ground and more forb-iness than we'd like to see. Pg 7, slide 4: great example of a dynamic natural system; photo shows alluvial deposition. Pg. 7, slide 5 shows photo of South Fork Meadow that has high runoff and sediment deposition potential because of the barren hillslopes above the meadow.

Gabe Fogarty: Degraded is one step better than nonfunctional?

Todd: Yes.

Kern Plateau Grazing Allotments Headcut and Photo-Point Monitoring: Casey Shannon described objectives and results of headcut and photo-point monitoring on the Kern Plateau. See PowerPoint presentation. Pg 8, slide 6: the right photo shows a site with a water table that visually appears to be rising. It has more vegetative cover and a wider flood plain in 2011 than the site did in 2003. Pg 9, slide 1 shows an upward trend from 2003 to 2011. The right photo shows that the channel is narrowing. Pg 9, slide 2: recovery is observed around this headcut in Shaeffer Meadow; however, it is still vulnerable and fragile. It's hard to say why there is so much erosion in Schaeffer. Pg 9, slide 4 shows a migrated headcut where a headcut structure failed. This site has not been grazed by livestock in about a decade. We see from this that it is not necessarily easier to treat ungrazed areas. Pg 9, slide 5 shows an active headcut in Stokes Stringer section 1; this

location is a "risky" site where erosion tends to happen. Pg 9, slide 6: the 2003 photo shows an active headcut. A grasshopper invasion denuded this meadow and other surrounding meadows in 2003 and explains the low vegetation observed in this photo. Next slide: we couldn't find the transect monitoring monument for the repeat photo in 2010 because of the recovery of the site.

John Hunter: It would be good to see a description for the 2003 photo that explains that there was a grasshopper invasion that year.

Casey: Good point. That invasion happened across all the allotments in 2003. We haven't seen an event like that since then.

Wade Parsons: When was grazing removed (from the Whitney and Templeton allotments)?

Casey: 1999 was the most recent year of cattle grazing for those two allotments.

Scott Kemp: It would be good to make sure that to explain why the vegetation looks so bad in 2003 photos.

Gabe: These headcut photos (from 2003) are the only photos that people have seen of this grasshopper event.

Janice: It would also be helpful to include precipitation data because the grasshoppers completely killed some drier areas of some meadows.

John Hunter: It will help cut down speculation on what happened in the grasshopper year (2003).

Casey: Pg 10, slide 1 shows photos of slow recovery from 2003 to 2010 in Big Whitney. Pg10, slide 2: Redrock Meadow is so productive that the headcuts structures were completely overgrown. Pg10, slide 4: the snow survey data from the last 8 years show that we've had active runoff conditions that could contribute to headcuts.

Mulkey Creek—Photo Comparisons from 1994 and 2011: Lisa Sims. Photos on left of slide are from 1994 and photos on right of slide are from 2011. These photo points are outside of the Mulkey exclosure. Mulkey Creek has been continuously grazed between these dates (that is, that portion of the Mulkey allotment has been active). Starting with pg 10, slide 6, the next five slides show sites that have increased sedge and willow establishment in 2011 compared to 1994. Pg 11, slide 5: the 2011 photo shows deposition from the July 6 storm event; this photo shows a functioning floodplain, which contributed to a Proper Functioning Condition rating. Pg 11, slide 11 are photo points inside the exclosure. Inside the exclosure had the same increase in willows and sedges that was observed outside of the exclosure. The establishment of willows is related to the site potential for willows and available water.

2011 Storm Events—Mulkey Meadow during the July 6 Rain on Hail Event: Lisa Sims. See PowerPoint presentation. Pg 12, slide 2: left photo shows the meadow flooded. Right photo demonstrates how will Mulkey Meadow responded to that event—the creek held together (nothing washed out). For the following slides (pg 12, slides 2-6; pg 13 slides 1-2), left photo is July 6 right after the rainstorm ended; right photo shows vicinity a few weeks later in August/September. New deposition is visible in pg 12, slide 5 and pg 13, slide 2. This event was "flashy", [with] where the flooding receded fairly quickly.

Comparison Photo-Points—Photographic records of ecological trend on the Kern Plateau with change in grazing management: Lisa Sims. See PowerPoint presentation.

Nick Ettema: (see pg 13, slide 4) Overall, streams did not have much change in bankfull width. Relative to other streams in the Sierra Nevada, the streams were narrower, but the Kern Plateau is drier than other parts of the Sierra.

Lisa: Photos of Ramshaw Meadow in show an upward trend from 1988 in both 1997 and 2005. Ramshaw is a warmer, more productive site than the Mulkey sites. The rapid recovery observed in Ramshaw is not surprising. Pg 14, slide 4: the Templeton Meadow Exclosure is actually a riparian enclosure. (Cattle did graze inside of it.) Pg 15, slide 1: we are seeing the meadows trap sediment. Pg 15, slide 3: increased vigor of vegetation is evident.

Fens on the Kern Plateau: Kathleen Nelson. Pg 16, slide 1 shows a fen meadow polygon map of the Kern Plateau. We are trying to visit a sampling of these polygons; we don't have the resources to visit them all. Pg 16, slide 2: it was typical to see a spring hole surrounded by a peat body. Pg 16, slide 3: a comparison of mineral soils (right hand), which leaves hands dirty, and organic soils (left hand), which leaves hands relatively clean. Confirmed fen bodies were typically much smaller than the overall wet area mapped in the fen meadow polygon map. Pg 17, slide 1: we assigned an upward trend to Functioning—at risk (FAR) ratings when we observed vegetation establishing on the sides of hummocks and in between hummocks; no apparent trend when there was no vegetation re-establishment observed; and downward trend when we observed active erosion. Fen data are fairly new, so we don't usually have previous information in existence to easily determine a trend.

Dave Kruger: Is moss always an indicator of a fen?

Kathleen: Not always, it depends on the moss species. Some mosses do appear to be mostly restricted to fens.

Janice: (In reference to pg 17, slide 6) The dry peat in this photo looks similar to when rodents kick up snow when tunneling.

Kathleen: True, but this is different. There was dry peat at this site at a larger scale.

Kathleen provided an overview of the specifications that the fen IDT used to confirm fens on the Kern Plateau. (Some of these specs: To be considered a fen, there needs to be at least 40 cm of organic soil in the top 80 cm of soil.) . For fens on the Kern Plateau, primary risk factors affecting proper functioning condition are hummocks and bare peat. The current regional standard for bare peat for a fen is no more than 10 – 15%%, but for some fens we had to take into consideration that higher amounts of bare peat appeared to be natural. (For example, *Carex utriculata*, a late seral sedge that we often observed in fen bodies, often has bare peat/bare ground in the plant interspaces.

Rare Plants on the Kern Plateau: Kathleen Nelson. There is a high occurrence of endemic species on the Kern Plateau, but we have little data on these endemic species. Data are sometimes obtained from passing-through botanists. The main species we will discuss is Ramshaw abronia, a rare plant found only on the Kern Plateau. Abronia grows on the sandy, well-drained margins of the meadows where there is sparse vegetation and the days are hot and the nights are cold.

Wade: Is there variation in abronia color?

Kathleen: Not really, I've seen only two white abronia flowers (albino).

Kathleen: Monitoring of abronia damage from grazing began in 1986. Data from 1986 showed that 50% of plants were trampled by cattle. Pg 19, slide 2 shows a damaged plant. For monitoring, there are different levels of damage. A trailing strategy implemented in 1991 greatly reduced trampling to under 10%.

Rose: (In reference to pg 19, slide 3) Is the only damage from trampling or do cattle also eat abronia?

Kathleen: Cattle don't eat abronia. Occassionally, ants or rodents may eat it.

Scott Kemp: Why was there less damage from 1987 to 1988 or an increase in damage from 1986 to 1987?

Kathleen: We can't be sure.

Scott Kemp: Abronia was all over Ramshaw in the 1960s and 1970s. Was the decline caused by cattle or other pests?

Kathleen: We looked specifically at livestock impacts. Monitoring didn't begin until 1986. If there is information out there, photos, etc. that might help us determine any previous distribution, I'd love to hear about it. Extensive surveys were conducted on the Kern in the mid-1980's. I've tried to track down any historical records that may indicate it occurred elsewhere, but have come up empty handed.

Scott Kemp: There were more cattle *and* abronia in the 1960s and 1970s, I'd say.

Kathleen: With this data collection and monitoring, we're working with lots of unknowns. The damage observed (for the figure on pg 19 slide 3) was attributable to cattle.

Kathleen: In 2011 we had the highest abronia numbers recorded. We haven't been able to find a correlation with anything; climate and precipitation have not seemed to explain numbers. In 2003 we recorded one of the lowest numbers of abronia. (See pg 19, slide 4.) Was this tied to the grasshopper event that occurred that same year? We don't know.

Janice Hunter: Are the subpopulation numbers variable? That is, some years you find some and some years you don't find any in certain locations?

Kathleen: Yes, the abronia numbers seem to be all over the board over time between subpopulations, i.e. in some years some subpopulations may be up and some may be down; one subpopulation represents approximately 60% of the total population.

Kathleen: The Conservation Strategy Action Items are in conjunction with the Fish and Wildlife Service. The first three items are grazing strategy-dependent.

Discussion on water quality (no PowerPoint presentation): Margaret Wood briefly described the 2010 *Sacramento Bee* article that generated interest/concern for water quality on grazing allotments in California. In conjunction with the Forest Service, Dr. Ken Tate and his team at UC-Davis implemented a water quality study across five National Forests (NFs) in California with about 200 sample sites to sample water quality sites and correlate the results with grazing strategy. None of these sites were on the Inyo NF, but several NFs had sites similar to those found on the Inyo NF. We can't meet water quality sampling times on the Kern Plateau. There may be site-specific areas that aren't meeting water quality standards; for a long time Best Management Practices (BMPs) were considered sufficient to protect water quality. Stay tuned to this, we (the Inyo NF) are currently doing water quality sampling at select sites. Margaret asked Doug Cushman to speak about water quality from the Lahontan Regional Board perspective.

Dough Cushman: Our (the California State Water Quality Control Board) mandate is to protect water quality. There are nine regional boards in California. The Lahontan Regional Board is Region 6 and covers 20% of California. Water in Region 6 is relatively pristine. We follow the Basin Plan that outlines beneficial uses that we must protect. The State

Board has directed the creation of a State Grazing Plan, so we have been getting water samples the last few years. We realize that where cows have unrestricted access to water, the fecal coliform numbers go up.

Doug described sample results from Horseshoe for 2012. Other data are available on the Lahontan Regional Board website. Sampling is not focused just on the Inyo.

Doug: We have a $1 million grant that will be split three ways. One third will be used to track pollutants and will focus on 303d waters. One third will be an outreach match with ranchers. One third will be used to monitor the effectiveness of various programs.

Rose: At what level of fecal coliform counts is the human health concern?

Doug: Nationwide, the standard 200 fecal coliform units per 100ml. In Region 6, the standard is 20, recognizing that our waters in Region 6 are fairly pristine and recreation is high. We are not doing enforcement on exceedance of this standard. We are working with the State Boar to develop another standard.

Debbie Bruschaber: Does exceeding the standard of 20 put a water body on the 303d impaired waters list?

Doug: Lots of factors play into the listing of a water body as impaired. The EPA and State Water Board both desire to move away from the fecal coliform indicator and want to go straight to E.coli, but this is a couple of years down the road. Fecal coliform bacteria are a big box, and E.coli bacteria are a small box inside of that. (That is, E.coli bacteria are a subset of fecal coliform.

Dave Kruger: So you're saying move to a more definite standard?

Doug: Yes.

Todd Ellsworth: In reference to Debbie's question, no water bodies on the Inyo NF are on the 303d list.

Doug: We are trying to develop state-wide policy, but we're also trying to determine the most practical and feasible management measures.

Janice Hunter: I have two questions—1) Can you describe the development of the 20 vs 200 standard, and 2) are you doing follow up monitoring when you observe and exceedance?

Doug: Yes, we do a tri-annual (every three years) review of the list of 303d water bodies. We try to sample 5 days a month; the State Board set that protocol, to have a 5 day per 1 month running average. Getting 5 days of samples over a month depends on the availability of staff. It takes 5 days to plate a sample and have a bacteria count. Because of the budget situation, there are limitations with resources. Sacramento (the State Board) asked Region 6 to take the lead on a new statewide standard. Contact recreation drives the standard. In 1977, many samples were taken, and the results showed that we had pristine water in Region 6; there was direction from the State Board to set strict standards where water was pristine.

Tom Noland: Did Horseshoe Meadow fail the test?

Doug: It exceeded the standard (of 20) twice.

Tom asked for clarification on ppm. Doug described the procedure for counting fecal coliform bacteria.

Dave Kruger: Does the level of 200 always indicate a human health hazard?

Doug: No.

Dave K.: Does it always indicate E.coli?

Doug: No, that's why the EPA wants to revisit this.

National Environmental Policy Act: Lesley Yen described the NEPA process and where the Kern grazing analysis is at in this process. NEPA decisions are based on best-available science. The NEPA process will be used to determine what should grazing and grazing management look like on the Kern Plateau in the future. Right now, we are in the proposal development portion of the NEPA triangle. In the next side of the triangle, we will talk about issues raised during public scoping and the best available science to develop an environmental impact statement. We will also consider alternatives brought forward by the public to the Forest Service's eventual proposed action. During the analysis phase of NEPA, the public will have several opportunities to provide feedback, and then a final decision will be made by the line officer. The assessment of the grazing allotments on the Kern Plateau will be an Environmental Impact Statement (EIS) which is the highest level of decision at the Forest level.

Margaret Wood: After the final decision is signed, an appeal may be made, in writing to the NF, on that decision. The decision then goes to the next line officer up who either supports or remands that decision.

Rose: People need to know that if you don't engage in the beginning of the NEPA process, you lose standing with the Forest Service to appeal. I encourage participation in writing to the Forest Service. Also, others can propose alternatives; it's not limited to the Forest Service. NEPA is very empowering if you take advantage of it.

Debbie: Where are we in this (what part of NEPA)?

Lesley: Proposal development/data collection.

Margaret: The target date for the proposed action is spring 2013 or winter 2013. This gives us another summer to try to see Templeton during a public field trip.

Rose: If grazing is decided for Whitney and Templeton, what is the process for grazing to occur?

Margaret: This is cart before the horse right now, but we have a process for permittee selection. It includes the ranger's discretion, permittees who have had reduced livestock numbers from decisions, and permittees who have been successful with their allotments.

Rose: Permittees are just given the permit?

Margaret: Permits cannot be sold, only waived.

Rose: The Wilderness Act of 1964 specifically authorizes grazing only where it already exists. Right now, grazing doesn't exist in Whitney and Templeton.

Margaret: Yes, it does. These allotments have been rested for improvement, not entirely closed to grazing.

Debbie: Is there data on the fish? Who collects that?

Margaret: The Forest Service is responsible for the fish habitat. We are in partnership with the California Department of Fish and Game (CADFG). CADFG focuses on population numbers of the fish.

Debbie: How are they (CADFG) providing input? Do they?

Margaret: They will provide input. Right now the fish are in good shape.

Lisa: Golden trout are very specifically adapted to the Kern Plateau. CADFG are monitoring population numbers. We will work in conjunction with them to correlate population numbers with fish habitat.

Closing: Margaret expressed her appreciation with everyone who made it out for this field trip and the afternoon's presentations.